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A screening survey of 272 first grade pupils, for the purpose of detection and remediation of special learning problems was conducted. Purposes were to: (1) screen out pupils with potential learning and school adjustment problems, (2) prevent the amplification of these problems and (3) suggest, to teachers, proper techniques and methods of grouping in the classroom. The Richmond Screening Examination, form JPIIEXP was used, with sections on (1) Personality Evaluation and Emotional Adjustment, (2) Inquiry to Draw-a-Person, (3) Perceptual Ability and Organicity, (4) Reading Ability, and (5) Lateral Dominance, Eye-Hand-Foot Coordination. The results were evaluated in terms of (1) organicity or perceptual difficulties, (2) emotional problems, (3) mental retardation, and (4) reading level. Results revealed: (1) many more pupils with emotional problems than was expected, (2) students with above average intelligence but with mixed dominance did not reach their full reading potential, and (3) there is a need for tests to detect reading problems early. Participating personnel feel that the value of the study lies in the joint meetings of teachers, psychologists, and consultants and the subsequent stimulation of more action toward early problem detection and prevention of children with learning problems. (Author/GG)

ED 027 556

PRELIMINARY SUMMARY REPORT ON THE JPII PROJECT

A Screening Survey of 272 First Grade Pupils (Junior Primary II)
For the Purpose of Early Detection and Possible Remediation of
Special Learning Problems

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Conducted by:

Psychological Services
RICHMOND PUBLIC SCHOOLS
Richmond, Virginia

1966

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PART I

AIMS AND PURPOSE OF THE JPII PROJECT

The need for screening pupils before entering the school system has been recognized for some time. It was felt that much could be done for the pupil if his potential problems and difficulties could be detected early enough so that remedial steps could be taken as early as possible. In the past, the staff of school psychologists as part of the Guidance Department has sporadically rendered such early identification services by examining individual students or holding screening interviews, either upon referral from schools or during their presence at pre-registration in the prospective school. In these cases, directions for remedial work were usually given, but no systematic approach was ever attempted.

The project for screening of pupils with potential learning problems was first envisioned in spring of 1965 but was not carried out on a larger scale until spring 1966. The term "Potential Learning Problems" refers to all aspects of a pupil's psychological make-up that might interfere with his future success in school, including emotional, intellectual, perceptual and organic factors. The entire screening project consists of three phases:

Phase I: Screening of Pre-School Children (Pre-Kindergarten)

At the time of pre-school registration in the elementary schools, customarily held during May of the year preceding school entry, school psychologists attend registration sessions to render psychological consultation services to principals and parents where indicated. Brief testing and interviews of selected children are carried out wherever indicated. In the event that a child is found to be not ready for school, advice is given to the parents or guardian regarding referral procedures to proper agencies or clinics in the community.

Phase II: Screening of Selected JPII Grades (First Graders)

School psychologists select several elementary schools where they examine entire classes of JPII pupils for purposes of psychological screening. Results of the tests will subsequently be discussed with the classroom teacher, in cooperation with the elementary school supervisor or consultants assigned to the school.

Phase III: Joint Visitations to Target Schools

Both school psychologists and elementary school consultants visit the JPII classes, as selected for Phase II, and subsequently have joint meetings with the respective teachers. At this time, the School Psychologist discloses results of the screening and points out pupils who show early signs of learning difficulties. Remedial effort to overcome these difficulties are then determined jointly by the team. The Elementary School Consultant makes recommendations especially in the areas of curriculum adjustment and individual teaching techniques, while the school psychologists suggest guidance practices and therapeutic possibilities for selected pupils. The classroom teacher has an opportunity to discuss individual children and may ask for specific recommendations from the visitors regarding placement, promotion, referrals to community agencies or clinics, or other appropriate action.

This preliminary summary report will describe PHASE II only. The specific purpose of the screening project for the JPII classes was as follows:

1. Screening out pupils with potential or actual problems related to learning and school adjustment;

2. Preventing problems, once identified, from becoming amplified or aggrevated by initiating proper guidance or treatment procedures; and

3. Teaching and managing pupils affected with these problems by suggesting to the teacher special techniques and appropriate grouping of pupils in the classroom.

PART II

PROCEDURE

1. Schools

JPII classes from four elementary schools in the Richmond Public School system were selected for the project. For this purpose, entire classes were screened by teams of school psychologists. The following schools participated:

Maymont	(2 classes)
Patrick Henry	(4 ")
Lee	(2 ")
Franklin	(3 ")

2. Subjects

Pupils selected for the project were 6 years of age on the average (born in 1959), with some older pupils (repeaters) also included. Both sexes were represented in the sample in about equal numbers. The final evaluation was based on the test records of 272 pupils.

3. Screening Instruments for Psychologists

A special form, called the RICHMOND SCREENING EXAMINATION, FORM JPII-EXP., was used (see EXHIBIT . . This form was specifically developed for the screening project and prior training sessions were held with all participating school psychologists to insure its uniform administration. The form provides space for recording observations in the following categories:

I. Personality Evaluation and Emotional Adjustment (Draw-a-Person)

II. Inquiry to Draw-a-Person Test

III. Perceptual Ability and Organicity (Gesell Figures required copying of simple geometric figures)

IV. Reading Ability (Wide Range Achievement Test)

V. Lateral Dominance, Eye-Hand-Foot Coordination (Simple Funnel Test)

4. Time and Location

Testing was carried out in the schools during spring of 1966, with joint psychologist/consultant visitations approximately 2-3 weeks afterwards, also at the schools. Several meetings were conducted with each classroom teacher.

5. Evaluation

Screening results were evaluated by the psychologists in terms of:

a. Organicity or perceptual difficulties
b. Emotional problems
c. Mental retardation
d. Reading level

After the administration of all tests, psychologists identified the test records of those pupils falling in one or several of the above categories. Judgment was based on test results, intuition and agreement among a team of psychologists.

Subsequently, results were transcribed on index cards (3 x 5) and statistically evaluated.

6. Follow-up

A follow-up of all pupils examined is planned for the following years. The index cards, specially labeled to stand out, will be included in the reference file maintained in the department. Any future referral will be checked against these files. Follow-up visitations to the respective schools by the psychologists and consultants are also planned for 1967 (one year interval). It will then be determined how many pupils out of those marked as "problems" still possess their handicaps. Again, suggestions as to their adjustment in the classroom or different placement will be discussed.

PART III

DISCUSSION OF PRELIMINARY RESULTS

Preliminary results are presented in Exhibits II and III. The total number of participating pupils was actually somewhat higher but due to technical difficulties only three out of four schools could be included in the final statistical evaluation.

While a certain number of mentally retarded and organic pupils would have been expected, the relatively large amount of pupils with emotional problems should be noted, representing 17% of the total sample. The number appears to be in no proportion to the special education class facilities now available in the school system.

The dichotomy reader/non-reader must be considered an arbitrary one since the Wide Range Achievement Test was the only instrument used to establish reading ability and is limited to oral word recognition only. The entire distribution of scores for the WRAT Reading Grade follows a normal curve pattern.

Special emphasis in the preliminary evaluation was placed on the question of "mixed dominance" following the assumption that this perceptual phenomenon has an adverse influence on reading. Two special groups were isolated for purposes of establishing a comparative basis, namely pupils with unilaterally right dominance (right eye, hand and foot), and the so-called mixed cases (right hand; left eye; right foot). Other categories were not represented in sufficient frequency to consider them adequate samples in terms of numbers. Exhibit II B gives the results of this comparison. It can again be noted that the reading scores for both groups follow the normal curve. If one were to determine an arbitrary cut-off point for above and below average scores, the results show that there can be little significance attached to the below average scores. It is possible that the test used was not sensitive enough to pick up any reading peculiarities or idiosyncrasies that would give any clues as to the reasons for poor reading. A definition of "poor reading" cannot be given by an oral word recognition score alone but would have to include other facets of the reading process.

On the other hand, inferences from results obtained for above average readers in the two groups (RRR and RLR) seem to be more useful in terms of predictive value. It can be noted that unilaterally right oriented pupils (RRR) are found twice as frequently in the above average group than in the mixed dominance group (RLR). This is in line with findings of previous research conducted by the department where it was also found that students who are above average in intelligence but have mixed dominance pay a penalty for this condition by not reaching their

full reading potential. Also, a developmental factor seems to cloud the picture: The more a pupil has advanced in reading, the more pronounced his reading deficit will show up. This is why reading problems are difficult to detect early--at least for the time being. A reading retardation of a young child can necessarily show up only in a small deviation of the actual from his potential reading ability, while in an older child who reads on more advanced levels, the difference between actual and potential reading level is much wider, thus more amenable to signigicance testing and inference. The observation also has a bearing on the "instrument factor", i.e. the more sensitive the reading test, the more useful is the difference score and, consequently, the identification of possible reading problems. There is an urgent need for a test, global or specific in nature, that will be sensitive enough to pick out reading problems early. Mixed dominance may be only one factor that might be of critical significance in the early identification of pupils with reading problems. Ideally, such identification should take place at age four, prior to school entrance, or in nursery school and kindergarten. Another factor that may have contaminated the clearness of the results is the fact that apparently the scores for both groups form a normal curve which would make it appear as if no significance can be attached to the results simply by comparing the two groups. However, theorists have pointed out that the normal curve often masks a series of discontinuous variables, (Allport). The proportions of below and above average reading scores, in percentage, are represented graphically in Exhibit III. Cut-off scores for the extremes were determined arbitrarily but are equal for both groups.

It is felt that the ultimate criterion for the effectiveness of the study will be met when a long-range follow-up is conducted for all students involved in the survey. Future referrals for psychological examination will be carefully watched and their number and type noted by the investigators. However, a contaminating factor will be operant in so far as the teachers have already been given some guidance by attending the conference after testing was done by the school psychologists. On the other hand, the follow-up may pick up the cases which were not isolated as problems but which will show up as "misses" later on, in addition to the "false positives" earmarked as problems by the examiners but not coming to the attention of the Guidance Department for one reason or another.

It was felt by the participating personnel that the greatest value of the study thus far stemmed from the joint meetings of teachers, school psychologists and consultants after all children had been screened. It is believed that the project stimulated further action along the line of early detection and prevention of children with learning problems in at least three ways: (1) It has built up the morale of the classroom teachers; (2) It provided in-service training to the classroom teacher not otherwise available; and finally (3) it provided the research-orientated school psychologist with valuable clues as to the direction which future action research should take.

Report prepared by:

RUDOLPH F. WAGNER
Chief Psychologist

EXHIBIT I

RICHMOND SCREENING EVALUATION, FORM JP2-Exp.

NAME: BIRTHDATE:

SCHOOL: TEACHER:

I. DRAW A PERSON (Record Observations)

II. INQUIRY FOR DAP

(1) What kind of person is this?

(2) How old is he (or she)?

(3) What is the best thing about this person?

(4) What is the worst thing about this person?

(5) Put your name on the paper. (If omitted, ask for last name.)

III. GESELL FIGURES

(1) Circle
(2) Cross
(3) Square
(4) Triangle
(5) Divided Rectangle
(6) Diamond (H)
(7) Diamond (V)

IV. WIDE RANGE ACHIEVEMENT (WRAT)

(1) Reading Grade _____

(2) Observations:

(3) Count the Dots

V. LATERAL DOMINANCE

(1) Hand

(2) Eye

(3) Foot

EXHIBIT II

STATISTICAL BREAKDOWN FOR THE JPII PROJECT

A. The Total Picture

Category	Number	Percentage
Total Number of Pupils	272	100
Male	137	50
Female	135	50
Right-handed	242	89
Left-handed	30	11
Emotional Problems	47	17
Organic or Perceptual Problems	36	13
Mentally Retarded	20	7
Non-Readers (1.0 and below)	27	10
Environmentally Induced Problems	1	0

B. Lateral Dominance (Eye-Hand-Foot Coordination)

The two groups contrasted below for comparison represent the two major categories in the study of dominance. The groups are labeled, respectively, as RRR (unilaterally right in eye, hand and foot) and RLR (hand right, eye left, foot right). Both groups together represent the largest proportion of the entire sample and account for 84% of the sample. When the reading scores of the two contrasting groups are plotted on a curve, a normal curve emerges for both. For the convenience of studying the two extremes of the curve, arbitrary cut-off points were established, as given below. A more graphic representation of the results is shown in EXHIBIT III.

	UNILATERAL RRR	MIXED RLR
Total Number in Group	135	93
Reading Grade 0.9 and below (Non-Readers)	10%	6%
Reading Grade from 1.0 to 2.1 (Average Readers)	80%	89%
Reading Grade 2.2 and above (Accelerated Readers)	10%	5%

C. Specific Breakdown for Lateral Dominance

Group * (H-E-F) **	Number	Average Reading Grade	Range
R R R	135	1.58	0.0 - 3.8
L L L	12	1.59	0.9 - 2.7
R R L	3	1.47	1.1 - 1.7
R L L	11	1.38	0.7 - 2.3
R L R	93	1.59	0.0 - 2.8
L R R	8	1.12	0.0 - 1.7
L L R	5	2.22	1.3 - 3.1
L R L	5	1.84	1.2 - 3.4
Total Number:	272	Total Average:	1.60

* Total number of participating pupils: 272. There were eight subgroups or combinations with regard to the combination of dominance, calculated according to the formula: $C = 2^3 = 8$.

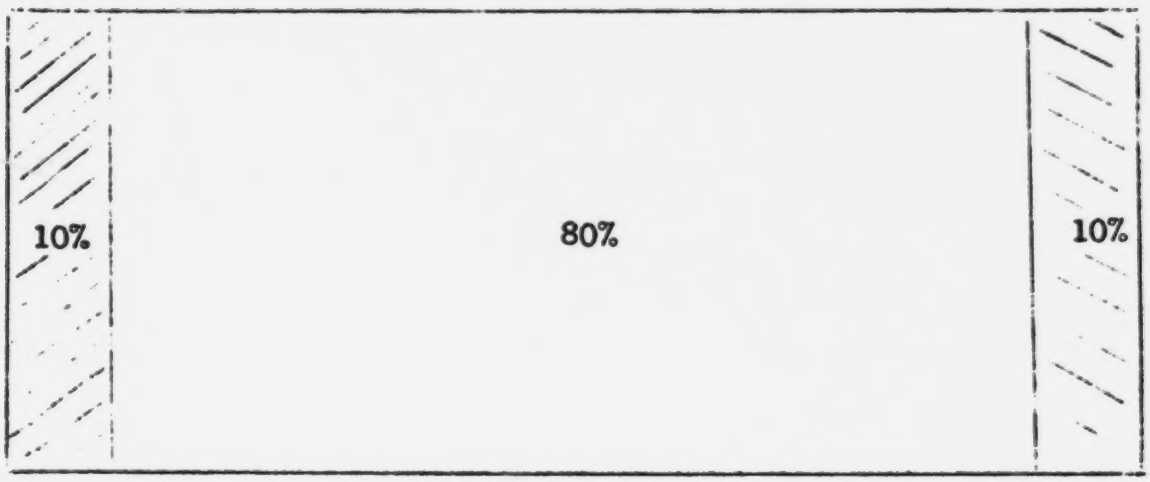
** H = Hand; E = Eye; F = Foot.

EXHIBIT III

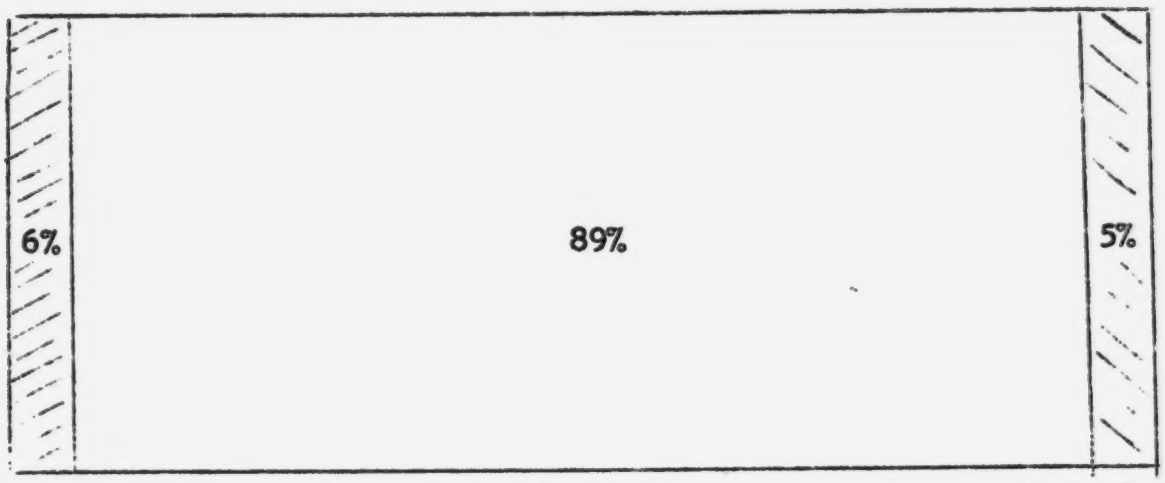
GRAPHIC REPRESENTATION OF UNILATERAL AND MIXED DOMINANCE IN TWO GROUPS OF JPII PUPILS

(In Percentages)

UNILATERAL GROUP (RRR)



MIXED GROUP (RLR)



Cut-off scores on both sides of the distribution were determined arbitrarily for the convenience of comparison:

Below Average (Non-Readers) --- Reading Grade 0.9 and below
Average (Average Readers) --- Reading Grade between 1.0 and 2.1
Above Average (Accelerated) --- Reading Grade 2.2 and above

FOLLOW-UP REPORT AND ADDENDA

JPII PROJECT 1966

The results of the JPII 1966 Project, a survey of existing learning problems in 6-year old first graders (See Preliminary Summary Report, 1966), were followed up during the summers of 1967 and 1968 to determine how many children were seen by school psychologists for an examination after they had been identified in the 1966 survey. Results of this follow up study are shown in TABLE 1a accompanying this report.

Columns 1 and 2 in TABLE 1a show the number and percentage of students originally identified in the 1966 survey. Columns 3 and 4 show the number of students referred for psychological examination during the school years of 1967 and 1968, respectively (more specifically, the school terms are 1966/1967 and 1967/1968). Column 5 indicates the total number and percentage of students examined during the two years ensuing the original date when the survey was conducted in spring of 1966. As can be seen from the percentage figures, in three categories the percentage of children followed up was slightly over 20%, or 1/5 of the number originally identified. The highest number followed up was the Mentally Retarded (suspected) category, with 40% followed up. These figures do not take into consideration the fact that several children were assumedly referred out of the school system, e.g., they were tested by private agencies or professionals, or transferred to other school systems. An exact assessment of the status of all children originally identified in the survey is planned for the summer of 1969, at which time a final report will be submitted.

Columns 7 and 8 give the number and percentages of children now remaining identified but not followed up. The quantity of percentage may probably be reduced considerably for reasons stated above, namely referrals to outside agencies and transfers to other systems. In addition, it should be noted that the original survey was followed up by intensive teacher training, thus most probably reducing the number of children to be referred by the teacher. As can be gleaned from TABLE 1a, the percentage of children not as yet followed up through individual referral is uniformly high for all categories in the study, with the exception of the Environmentally Induced Problems where the number is very low anyway. It is assumed that school administrators are best equipped to handle such cases by environmental manipulation, perhaps with the aid of social agencies if needed.

No conclusions can be drawn with certainty at this point until the final follow-through is made in 1969. However, it should be noted that a large number of children were followed up and that most probably this number is adequate when one considers variables such as administrative interventions (transfers, school manipulations), effects of the teacher training sessions following the survey, and finally maturational growth and development causing spontaneous recovery (this would particularly be true in the category of Emotional Problems where immaturity and emotionality are often part of early childhood symptoms of no pathological consequence.

It is also interesting to note that the number of "misses" (see last category in TABLE 1a), i.e. the number of students not positively identified in the survey but later on referred for psychological examination, is comfortably low and amounts to 4% of the total number of children seen in the survey. An attempt in interpreting this part of the general findings would suggest that these eight cases could have passed through the screening sieve of the investigators or could possibly have been cases which produced environmentally induced symptomatology after the survey measures were taken (e.g., divorce or death in family). A more precise assessment of these misses will be made in the final follow up.

A post mortem analysis of the results of the original survey, reported and graphed in the first report (Preliminary Summary Report, 1966, Richmond Public Schools) showed an absence of hypothesized reading problems for children with so-called "Mixed Dominance". The reason for this non-confirmation of hypothesized results may have to be sought in the fact that the instrument used, the Wide Range Achievement Test, 1946 edition, is relatively insensitive to the precise assessment of the reading ability of 6-year old students. For instance, a student need only identify single letters, and not a single word at all, to obtain a score above 1.0 on this test. Thus the results, namely the relationship between mixed dominance (eye-hand coordination) and reading level being low, cannot be definitely ascertained on the basis of the results obtained from the survey. The results may well have been influenced by an instrument factor, in this case the insensitivity of the reading test on lower grade levels. The results do support to some extent the statement that mixed dominance can lower a student's reading level if his potential is taken as the baseline. This conclusion is based upon an inspection of the ranges obtained in the reading test results.

October, 1968

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The helpful services of a research assistant, Miss Roberta Morris, are herewith gratefully acknowledged.

TABLE 1a

FOLLOW-UP OF THE JPII PROJECT
(N = 272)

Category	Assessed in Orig. Survey 1966		Referred by School After Survey 1967	1968	Total		Remaining in Category 1968	
	N	%	N	N	N	%	N	%
	1	2	3	4	5	6	7	8
Emotional Problems	47	17*	3	7	10	21**	37	79
Organic and Perceptual Problems	36	13	1	7	8	22	28	78
Mentally Retarded (Suspected)	20	7	2	6	8	40	12	60
Non-Readers (Below 1.00 grade level)	27	10	3	3	6	22	21	78
Environmentally Induced Problems	2	1	1	1	2	100	0	0
Examined in Survey but not classified ("Misses")	-	-	0	8	8	-	-	-
Totals	132	-	10	32	42	-	98	-

* Percentage of total sample, N = 272
** Percentage of number screened in survey pertaining to category

ROSTER OF PARTICIPATING PERSONNEL

The following personnel of the Richmond Public Schools participated in the JPII Project during spring 1966:

School Psychologists

Carolyn L. Bass

Mary Jane Birchett

Josephine Bonds

Claire E. Falke

Aurelia Ford

Sarah S. McCain

Frederick L. Jones

Harold R. Sheehan

James W. Woodruff

Elementary School Supervisors and Consultants

Ann D. Burke

Ashley W. Anderson

Dr. Marion B. Nesbitt

Willie B. Segar

Project Coordinator

Rudolph F. Wagner, Chief Psychologist